CITATION


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SUMMARY

Purpose To assess the ability of the SPECTRALIS® posterior pole asymmetry analysis (PPAA; Heidelberg Engineering) to detect localized retinal nerve fiber layer defects (RNFLDs).

Methods Eighty-four glaucomatous eyes with wedge-shaped RNFLDs identified by red-free RNFL photography and 122 healthy eyes were scanned with the SPECTRALIS to obtain circumpapillary RNFL (cpRNFL) thickness measurements as well as to perform PPAA. The diagnostic ability of PPAA and cpRNFL thickness analysis to detect RNFLDs was evaluated. Furthermore, these values were compared to those of previous studies using the ganglion cell complex (GCC) analysis to evaluate the macular region.

Results The use of a large scanning area allows PPAA to detect localized RNFLDs with excellent sensitivity and specificity, comparable to that of cpRNFL thickness measurements.

CONCLUSION

The authors’ suggest that assessment of macular symmetry using PPAA may be a more effective approach at detecting glaucomatous abnormalities than comparing macular thickness between healthy subjects and glaucoma patients. In some cases the PPAA may identify defects not detected by cpRNFL thickness measurements. In fact, the authors conclude that the larger scanning area of PPAA of 25° x 30° may provide better diagnostic ability than that of the GCC 20° x 20° cube.